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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/740,262	12/18/2003	Thomas J. Anderson	58716US002	1910
32692	7590	03/11/2008		
3M INNOVATIVE PROPERTIES COMPANY				
PO BOX 33427				
ST. PAUL, MN 55133-3427				
EXAMINER				
MARCHESCHI MICHAEL A				
ART UNIT		PAPER NUMBER		
1793				
NOTIFICATION DATE		DELIVERY MODE		
03/11/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com

LegalDocketing@mmm.com

### Office Action Summary

**Application No.**

10/740,262

**Applicant(s)**

ANDERSON ET AL.

**Examiner**

Michael A. Marcheschi

**Art Unit**

1793

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25, 28 and 49-57 is/are pending in the application.
- 4a) Of the above claim(s) 49-57 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/11/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application.
- 6) ☐ Other: \_\_\_\_\_.

Claims 1-25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 01/56947 for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 1, 2, 6, 7, 11, 12, 15-18, 22-25 and 28 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. 20030115805 for the same reasons set forth in the previous office action which are incorporated herein by reference.

Applicant's arguments filed 12/11/07 have been fully considered but they are not persuasive.

Applicants argue that alpha alumina is not transitional alumina (as evidenced by the article entitled "Standard Transition Alumina, Electron Microscopy Studies"). The examiner is well aware of this, however, this line of argument is not understood because the WO reference clearly teaches that the source of the alumina is gamma alumina (a transitional alumina). Applicants also argue that although the alumina source defined by the WO reference is transitional alumina, there is no evidence provided in the rejection that the resulting fused material would include transitional alumina. The examiner made 2 statements in the last office action, (1) that "the reference uses transitional alumina and thus, in the final product, some of the alumina will still be in the transitional form absent evidence to the contrary" and (2) page 11, lines 15-16 of the reference teaches that the eutectic is made up of an alumina phase and this implies any alumina phase, making transitional alumina obvious". Since the examiner clearly

stated reasons why transitional alumina is present in the final product or obvious therein, burden is upon applicants to show clear evidence to rebut the examiners position and applicants arguments do not clearly establish this.

Applicants also argue that given the process of the WO reference in which the materials are melted, the resulting fused abrasive particles would not include transitional alumina (crystalline structure of raw material destroyed). The examiner is aware of the methodology of the reference, however, applicants position is confusing because the claimed invention uses a similar methodology (i.e. melting), thus if applicants arguments that the reference, which uses similar methodology, cannot produce fused abrasive particles which include transitional alumina, how can the claimed invention (which uses the same source material and also melts the mixture-like the WO reference) produce a fused abrasive particles which include transitional alumina. It would appear that applicants arguments against the reference, which again use similar methodology (i.e. melting), would provide evidence that the claimed invention cannot produce fused abrasive particles which includes transitional alumina. In other words, if the reference relied upon is not capable of producing fused abrasive particles which include transitional alumina and the reference uses the similar methodology (i.e. melting) when compared to the claimed invention, how can the claimed invention produce fused abrasive particles which include transitional alumina?

Finally, the WO reference in claim 1, at least, does not define the alumina form, thus the form can exist as any known alumina form and one skilled in the art would have understood that the form can be consistent with source materials used.

Applicants appear to present the same argument for the 805 reference and thus these arguments are not convincing for the above reasons.

Applicants also argue the 805 reference in that the claims are directed to “fused polycrystalline materials” and according to the definition in specification, they are claiming a specific type of polycrystalline material. The examiner acknowledges the definition in the specification, however, this is defining methods by which the material is produced, and as is relevant to the instant composition claims, process limitations to define the product in “product-by-process” claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964. In addition, it is clear from the reference in the passages defined in the previous office action and specifically, section [0108] that the abrasive particles are melted (fused), 100% crystalline and contain multiple crystals (polycrystalline). With respect to the method of instant claim 28, it is stated that “it is within the scope of the invention to conduct a heat treatment to further improve the properties of the material” (section [0093]), thus if the material (abrasive particles) are 100% crystalline, as evident by section [0108], the abrasive particles are heat treated and this implies heat treating a (first) fused polycrystalline material. In addition, section [0092] coupled with section [0093], teaches that a ceramic (is defined as a crystalline ceramic) comprising the abrasive particles (fused polycrystalline-see above) is heat treated to provide a second material (heat treated product), wherein the claimed fused material is formed (see teachings in the previous office action).

Applicants also argue the 805 reference in relation to section [0098] in that this section teaches alpha alumina. Alpha alumina is preceded by the limitation “e.g.” as this merely means an example, which applicants clearly point out (page 11, line 26 of the response), thus this

passage does not preclude other alumina forms and since only a small number of other forms are known (gamma being the next most apparent from alpha), the arguments that this reference only teaching alpha is not convincing.

Applicants also argue that they are unclear as to how it can be concluded that the 805 reference anticipates the claims. The examiner is unclear as to how applicants cannot understand this because the office action clearly stated that "the claimed invention is anticipated by the reference because the reference teaches fused polycrystalline particles which comprises all of the claimed components. The reference uses transitional alumina (gamma alumina) and thus, in the final product, some of the alumina will still be in the transitional form absent evidence to the contrary".

Applicants have not provided any evidence that would show that no gamma alumina is present in the final product (i.e. the broad interpretation of "at least a portion of transitional alumina" as claimed can be interpreted to include, for example, 0.00000000001% transitional alumina) and applicants show no evidence that the final product of the reference will be totally devoid of any transitional alumina.

Applicants make a comment on the Thomas reference (6,641,631) defined in the interview on 10/17/07. Applicants state that this reference provides no evidence that the gamma form is present in fused alumina. The examiner acknowledges this and thus no further comment is necessary.

In summary, no evidence is provided which would clearly show that the references are devoid of any transitional alumina.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael A Marcheschi/  
Primary Examiner, Art Unit 1793